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PROVISIONAL SPECIFICATION.

An Improved Fermenting Process for Beer, Wine, and other Fermentable Liquids.

I, JOHANN SALOMON, of Brunswick, in the German Empire, Brewery Proprietor, do hereby declare the nature of this invention to be as follows:—

This invention consists in sterilising the fermentable liquid after a first fermentation and effecting a second fermentation by the use of head yeast, ground 5 yeast, wine yeast or other suitable yeast.

The object of the invention is to enable brewers to give their beers greater keeping power and make them more regular in quality at the same time rendering them more suitable for transport and their cold storage unnecessary.

The brewing, cooling and first fermenting processes may be carried out in the ordinary way although some kinds of yeast are better adapted for the purpose than ordinary yeast. To prevent infection it is desirable to carry out the cooling process as far as possible under exclusion of the atmosphere and provision of pure air.

After the first fermentation is complete, the liquid beer for instance—is sterilised by means of a contrary current heating and cooling apparatus or in another way, it being heated to about 60° Reamur, cooled and passed into clean vessels. It is then clarified (or clarification may have been effected previously to reaching the vessels) and then the second fermentation effected in using as pure a yeast as practicable.

The process may be modified by sterilising the liquid after the first or second fermentation and then impregnating the same with carbonic acid or this impreg-

nation may be effected after arrival of the liquid at its destination.

Dated this 15th day of April 1890.

CAPITAINE & VON HERTLING, 89, Chancery Lane, London, W.C., Agents for the Applicant.

COMPLETE SPECIFICATION.

An Improved Fermenting Process for Beer, Wine, and other Fermentable Liquids.

I, Johann Salomon, of Brunswick, in the German Empire, Brewery 30 Proprietor, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

This invention consists in sterilising the fermentable liquid after a first or principal fermentation so that all bacteria and other exciters of fermentation are destroyed; in carrying out a second fermentation by the aid of any suitable exciter of fermentation, further in sterilising the liquid after the first or second fermentation and forcing carbonic acid into the same.

This process enables greater keeping properties to be given to beers with greater regularity of quality at the same time rendering them suitable for transport without the necessity of keeping them in cellars refrigerated to near freezing point, therefore a large portion of the expenses for ice, ice stores and cooling installations may be saved and as by the sterilisation after the first fermentation all the yeast and bacteria are killed the subsequent fermenting process is carried out under prevention as much as practicable of infection and 45 generally under more favourable conditions.

[Price 4d.]

Salomon's Improved Fermenting Process for Beer, Wine, &c.

The brewing, cooling and the first fermenting process may be carried out in the usual way only in the fermentation it is better to use a pure selected yeast than ordinary yeast, also with a view to preventing infection it is better to carry out the cooling process quickly under exclusion as far as possible of the atmosphere and with provision of pure air.

After completion of the first fermentation the liquid beer for instance is sterilised by means of a contrary current heating and cooling apparatus or in another way, the same being heated under exclusion of air to about 80° Celsius then cooled down to cellar temperature and forthwith run into clean casks. After reaching these casks (or it may be previous thereto) it is clarified by means of 10 filters or other means and the second fermentation carried out with the use of a pure yeast or if such is not to be obtained by fermenting with beers in which yeast

as pure as possible has been used or in another suitable way.

The first or principal fermentation may be surface or sedimentary fermentation according as it may be desired to produce a beer rich in extract or alcohol and the 15 yeast for the second fermentation may be of any desired kind. The process, therefore, further presents the advantage that it is not obligatory in the case of beers that have undergone surface fermentation in the first instance to make the second fermentation a surface fermentation also, but it is quite permissible to change the kind of fermentation according to the character of the beer to be 20 produced, by using with beers which have first undergone surface fermentation, ground yeast for a second sedimentary fermentation (and inversely) also by using any other yeast.

The process may be varied by sterilising the liquid after the first or second fermentation and then forcing carbonic acid into it to saturate it therewith or this 25

may be done after arrival of the liquid at its destination.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:

1. A new fermenting process consisting in sterilising the fermentable liquid after 30 a first or principal fermentation so as to destroy all ferments, bacteria, etcetera, and then carrying out the second fermentation with the use of any suitable ferments substantially as described.

2. A new fermenting process consisting in sterilising the fermentable liquid after the first or second fermentation and forcing carbonic acid into the same sub- 35

stantially as described.

Dated this day of January 1891.

> CAPITAINE & VON HERTLING, 89, Chancery Lane, London, W.C., Agents for the Applicant.

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